

HSSD SENSITIVITY SETTINGS

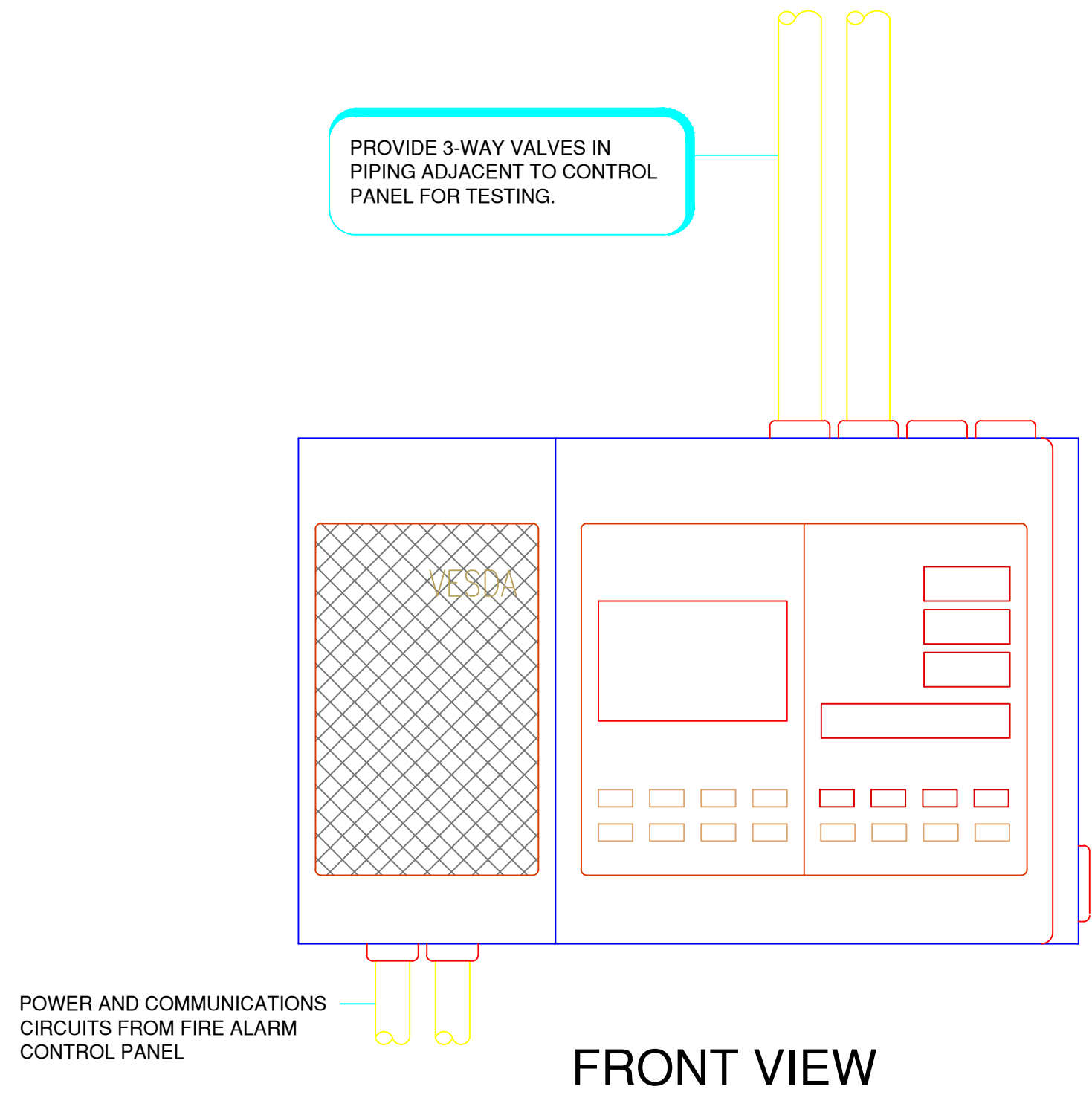
- IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, THE VESDA DETECTOR SHALL BE INSTALLED USING THE FACTORY PRESET "DEFAULT" SETTINGS, WHICH ARE PROGRAMMED FOR A COMPUTER ROOM ENVIRONMENT.
- UPON LBNL OCCUPANCY OF THE BUILDING, THE VESDA DETECTOR SHALL OPERATE FOR A PERIOD OF 14 DAYS FOR THE PURPOSES OF "BURNING IN" THE DETECTOR AND TO DETERMINE THE ACTUAL BACKGROUND OBSCURITY LEVELS OBSERVED. FOLLOWING THAT TIME PERIOD, THE DETECTOR SENSITIVITY SHALL BE ADJUSTED (AS NECESSARY AND APPROPRIATE) USING MULTIPLICATION FACTORS OF 3 TO 10, AS RECOMMENDED BY THE MANUFACTURER.

HSSD FUNCTION CHART

SYSTEM EVENT	RESPONSE	ANNUNCIATE EVENT AT FACU	FIRE SIGNAL TO LBNL RECEIVER	TROUBLE SIGNAL TO LBNL	SUPERVISORY SIGNAL TO LBNL	OPERATE NOTIFICATION APPLIANCES
HSSD ALERT ALARM		●			●	
HSSD ACTION ALARM		●			●	
HSSD FIRE ALARM 1		●			●	
HSSD FIRE ALARM 2		●	●			●
HSSD POWER SUPPLY FAULT		●		●		
HSSD DETECTOR FAULT		●		●		
SYSTEM FAULT		●		●		

SPECIAL NOTE:

THIS FUNCTION CHART IDENTIFIES THE REQUIRED FUNCTIONS FOR AREAS SERVED BY THE HSSD SYSTEMS, ONLY. REFER TO SHEET FA-02 FOR THE GENERAL FIRE ALARM SYSTEM FUNCTIONS ASSOCIATED WITH THE REMAINDER OF THE FIRE ALARM SYSTEM.



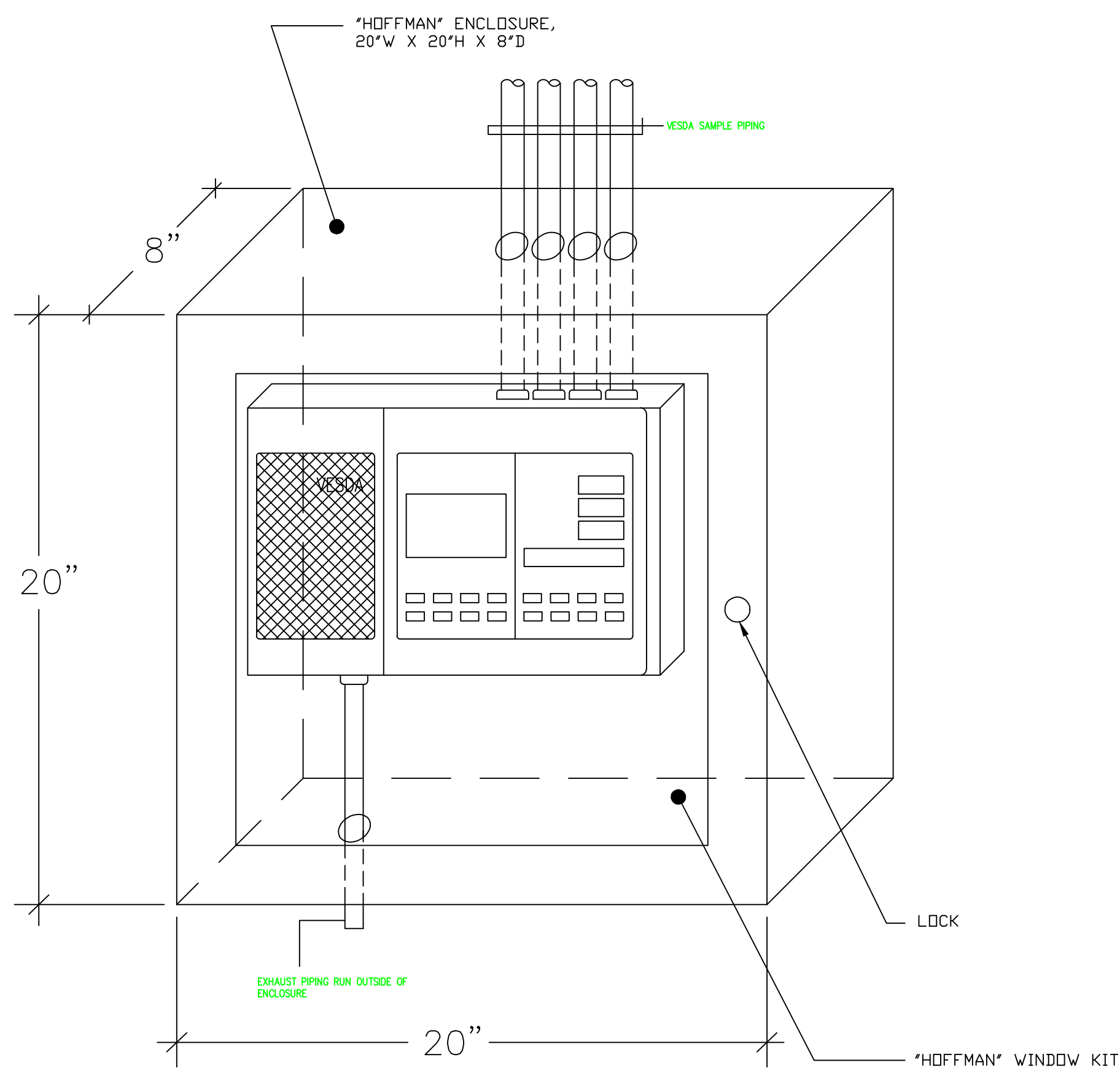
TYPICAL HSSD AIR SAMPLING CONTROL PANEL

SCALE: NONE

HSSD NOTES

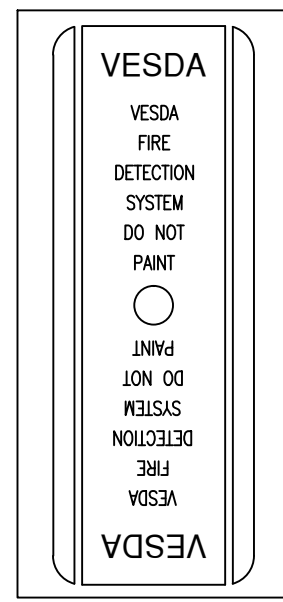
INSTALLATION

- SAMPLING PIPE NETWORK**
 - ALL PIPE WORK SHALL BE APPROPRIATELY SUPPORTED AT NOT MORE THAN FIVE (5) FEET ON CENTER.
 - ALL PIPE JOINTS SHALL BE MADE AIR TIGHT, EXCEPT AT ENTRY TO THE DETECTOR ENCLOSURE.
 - EACH END OF ANY BRANCH OF THE SAMPLING NETWORK SHALL BE TERMINATED WITH A MALE ADAPTER AND SCREW ON CAP TO FACILITATE MAINTENANCE BACK FLUSHING OF THE SYSTEM.
 - ALL CHANGES OF DIRECTION MAY BE MADE WITH STANDARD ELBOWS OR TEES.
 - THE SAMPLING PIPES SHALL BE IDENTIFIED AS A "FIRE DETECTION SAMPLING PIPE" AT INTERVALS NOT EXCEEDING 10 FEET FOR THE ENTIRE LENGTH.
 - THE PIPE SHALL BE INSPECTED BEFORE INSTALLATION. THE CORRECT SAMPLING PORT DIAMETER SHALL BE VERIFIED BY THE CAMPUS FIRE MARSHAL.
 - THE INTERIOR OF ALL PIPING SHALL BE CLEANED PRIOR TO INSTALLATION. THIS SHALL BE INSPECTED BY THE LBNL FIRE MARSHAL.
 - ALL PIPING SHALL BE LABELED AT 10'-0" INTERVALS AND BETWEEN CHANGES IN DIRECTION.
- THE SAMPLING POINT NETWORK**
 - EACH SAMPLING POINT SHALL BE IDENTIFIED IN ACCORDANCE WITH NFPA 72 STANDARDS WITH A SAMPLING POINT LABEL.
- THE VESDA END CAPS**
 - INSURE THAT ALL VESDA END CAPS WITH SAMPLING HOLE (ALL END CAPS PER FLOW CALCS) ARE ACCESSIBLE FOR PERIODIC TESTING.
 - WHEN THE END CAP MAY BE REACHED FROM A CATWALK OR FLOOR SPACE WITH A SHORT POLE, SMOKE SPRAY TESTING IS ACCEPTABLE.
 - IF END CAP IS ABOVE A DROP CEILING THEN ACCESS MUST BE PROVIDED.
 - THE LOCATION OF END CAPS SHALL BE ACCESSIBLE FOR ACCEPTANCE TESTING AND FOR MAINTENANCE TESTING.
- THIS DESIGN PROVIDES FOR AN HSSD SYSTEM FOR COVERAGE OF CORRIDORS ON ALL THREE FLOORS. THESE AREAS SHALL BE PROTECTED BY THE HSSD SYSTEM FOR OPERATION OF THE BUILDING'S OCCUPANT NOTIFICATION APPLIANCES AS DESCRIBED IN THESE DRAWINGS.
- THE HSSD SYSTEM SHALL UTILIZE AN IEI VESDA DETECTOR AND CPVC PIPE WITH DRILLED SAMPLE ORIFICES (ALL SIZED IN ACCORDANCE WITH THE CALCULATIONS). SAMPLE ORIFICES SHALL BE PROVIDED FOR THE BAY POCKETS FORMED BY THE STRUCTURAL BEAMS AS SHOWN IN THE DRAWINGS.
- ALL HSSD PIPING SHALL BE SUPPORTED FROM THE BUILDING'S STRUCTURAL BEAMS OR CEILING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. IN NO CASE SHALL THE SPAN OF UNSUPPORTED SAMPLE PIPE EXCEED 6 FEET.
- ALL HSSD PIPING SHALL BE MARKED AT REGULAR INTERVALS INDICATING THE PURPOSE OF THE PIPING.
- THE HSSD POWER SUPPLY SHALL BE LOCATED ADJACENT TO THE BUILDING'S FIRE ALARM CONTROL UNIT. THE POWER SUPPLY SHALL COMMUNICATE WITH THE CONTROL UNIT FOR SYSTEM STATUS IN ACCORDANCE WITH NFPA 72 AND AS SHOWN IN THESE DRAWINGS.
- THE HSSD DETECTOR SHALL BE LOCATED AS SHOWN IN THE DRAWINGS. THE DISPLAY SHALL BE 5 FEET AFF. THE DETECTOR SHALL COMMUNICATE WITH THE CONTROL UNIT FOR SYSTEM STATUS IN ACCORDANCE WITH NFPA 72 AND AS SHOWN IN THESE DRAWINGS.
- ANY LEVEL ALARMS BELOW THE HIGHEST THRESHOLD ALARM SHALL CAUSE FOR THE TRANSMISSION OF A SUPERVISORY SIGNAL TO THE FIRE ALARM CONTROL UNIT AND TO THE LBNL FIRE ALARM RECEIVER. THE HIGHEST THRESHOLD ALARM HSSD ALARM SHALL CAUSE ALL AUDIBLE NOTIFICATION APPLIANCES TO OPERATE AND SHALL ALSO CAUSE AN ALARM SIGNAL TO BE TRANSMITTED TO THE LBNL FIRE ALARM RECEIVER.

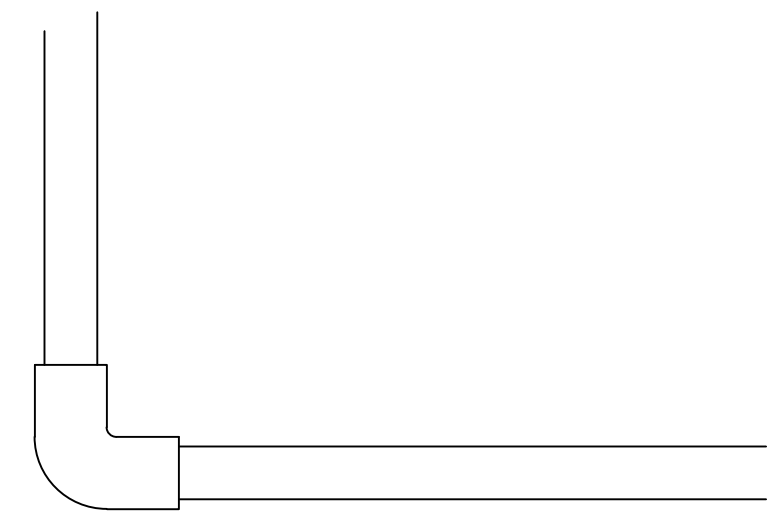


VESDA DESIGNATION LEGEND

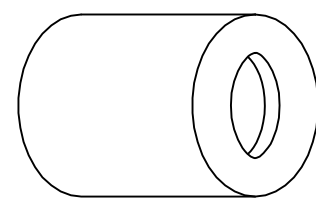
- PIPE 1 ← VESDA PIPE REFERENCE NUMBER
SECTION 1.1.1-1 ← HOLE REFERENCE NUMBER
VESDA PIPE SECTION REFERENCE NUMBER
- HSSD SAMPLE PIPING AND SAMPLE PORT (BELOW CEILING)
○ HSSD SAMPLE PIPING AND SAMPLE PORT (ABOVE CEILING)
- FIRE ALARM CONDUIT (3/4-INCH).
SEE NOTES PROVIDED ON EACH PLAN FOR CIRCUITS.
- 1 PAIR #16: SLC/ALD LOOP (L1)
(SEE RACEWAY NOTES ON EACH FLOOR PLAN)
- 1 PAIR #14: NOTIFICATION APPLIANCE CIRCUIT
(SEE RACEWAY NOTES ON EACH FLOOR PLAN)



SAMPLING POINT DECAL (E700-SP-DCL) AIR SAMPLING POINTS SHALL BE APPROPRIATELY LABELED



90 DEGREES ELBOW

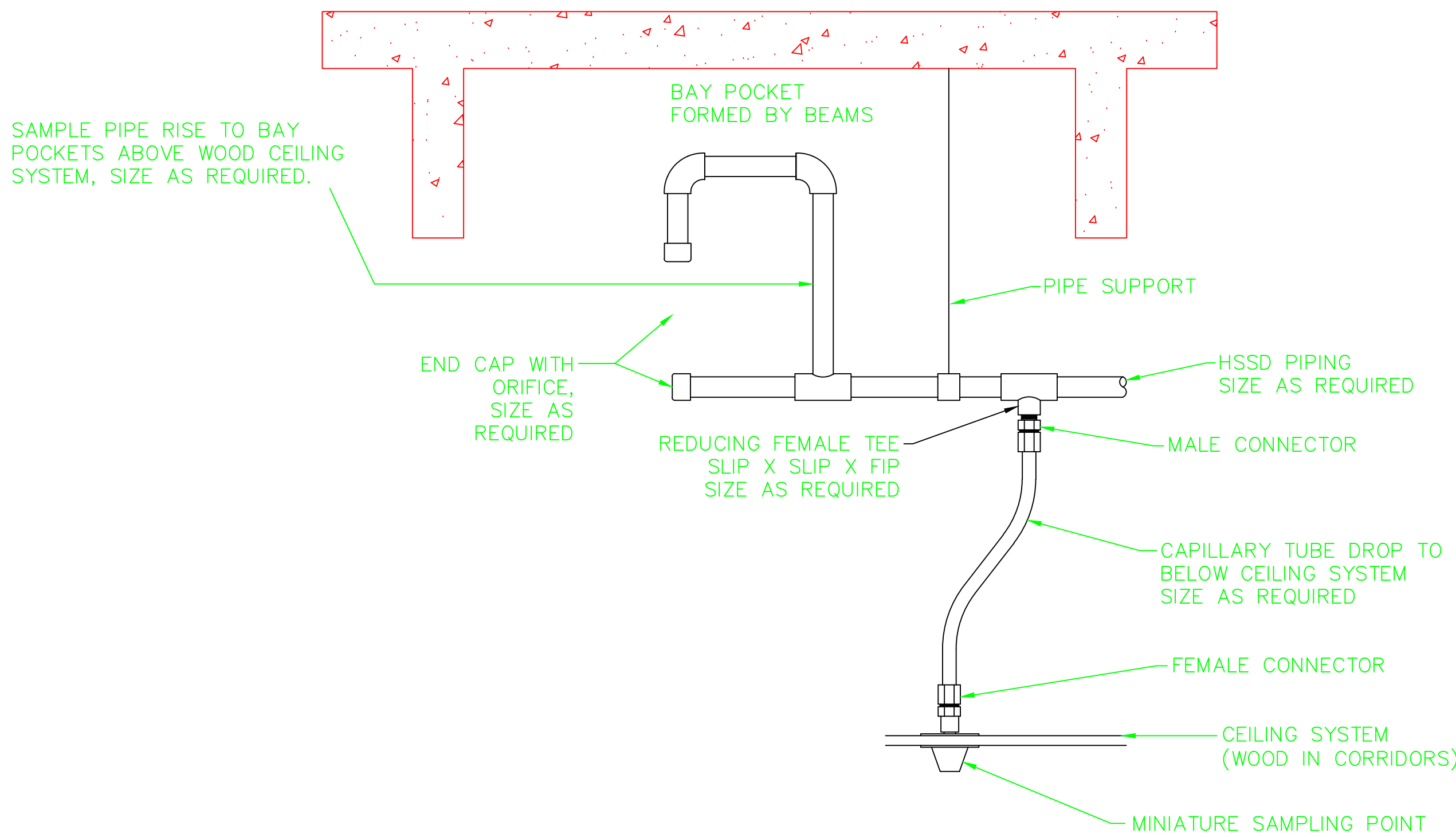


- THE END OF EACH SAMPLING PIPE MUST BE FITTED WITH A VENTED ENDCAP.
- THE FITTING OF AN ENDCAP OVER THE END OF THE PIPE BALANCES THE SENSITIVITY OF EACH OF THE SAMPLING POINTS POSITIONED ALONG THE LENGTH OF THE PIPE.
- THE DIAMETER OF THE ENDCAP VENT HOLE IS NORMALLY 5/32 INCH, BUT OTHER ARRANGEMENTS ARE POSSIBLE.

VENTED ENDCAP

MISCELLANEOUS VESDA PIPING DETAILS

SCALE: NONE



TYPICAL SAMPLING PIPE INSTALLATION DETAIL

THE DRAWINGS AND DESIGN HEREIN SHALL NOT BE REPRODUCED, COPIED OR INCORPORATED TO OTHERS FOR PROCUREMENT OR OTHER PURPOSES EXCEPT AS OTHERWISE AUTHORIZED BY CONTRACT. THE USER, WRITER, PROVIDER OF SERVICES, BUILDING TECHNOLOGIES, INC., THE SHEET OFFICE, ALL OTHER PARTICIPANTS SHALL BEAR THE NOTICE.

REVISIONS

No.	Revision	By	Date	Appr.
1	BULLETIN 5	JPM	9/20/10	KW
2	RESPONSE TO HYT BULLETIN 5 REVIEW COMMENTS	JPM	10/19/10	KW
3	REVISED PER LBNL FIRE MARSHALS' COMMENTS	JPM	10/25/10	KW
4	REVISED PER HYT REVIEW COMMENTS	JPM	6/6/11	KW
5	AS-BUILT	JPM	9/20/12	KW

AS-BUILT

NUMBER OF CONTRACT DOCUMENTS



HYT Corporation
Fire Protection Engineers and Consultants
3498 Clayton Road - Suite 101 Concord, California 94519
Phone: (925) 681-2731 FAX: (925) 681-2733

INSTALLATION CONTRACTORS NAME & ADDRESS:

W. BRADLEY ELECTRIC, INC.

90 Hill Road,
Novato, CA 94945

Tel (415) 898-1400 Fax (415) 898-5991

PRODUCT MANUFACTURER:

Siemens Industry, Inc.
Fire Safety Division

25821 Industrial Boulevard, Suite 300
Hayward, California 94545-2991
Tel (510) 783-6000 Fax (510) 293-2100
California State C10 License No. 758796
U.L. Certificate ID No. 324787-001

JOB NAME & LOCATION (STREET ADDRESS)

UNIVERSITY OF CALIFORNIA
LAWRENCE BERKELEY NATIONAL LABORATORY
FACILITIES DIVISION

**BUILDING 74
FIRE ALARM**

**LBNL SEISMIC
PHASE 2**

One Cyclotron Road,
Berkeley, California 94720

SHEET NUMBER

**HSSD MISCELLANEOUS
NOTES & DETAILS**

INSTALLATION TYPE

- ☐ NEW INSTALLATION
☐ DESIGN/BUILD
☐ PER CONTRACT DOCUMENT
☐ EXISTING BASE JOB # N/A
☐ OTHERS _____

SYSTEM SALES REP: Kevin Waxman

PROPERTY MANAGER: Mark Millard

DRAWN BY: JPM

CHECKED BY: FA-13

NOTED: Not Applicable

DATE DRAWN: March 18, 2010 PLOT DATE: March 27, 2014

DRAWING NO.

6N74E338

SHEET

FA-13

JOB NUMBER

440P-069681

IF DRAWING IS SHOWN IN PART, 30" X 42" IT IS A REDUCED COPY